

REMARKS

Reconsideration of this application in view of the above amendments and the following remarks are respectfully requested.

Claims 19, 29, and 35 are being amended, new claims 38 and 39 are being added, and claims 16-18 were previously withdrawn from consideration. Support for the amendments and new claims 38 and 39 can be found at least in the specification at page 6, line 21 through page 7, line 8, and at page 8, line 32 through page 9, line 27. Accordingly, after entering this amendment, claims 16-39 remain pending.

Claim Rejections under 35 U.S.C. § 103(a)

Claims 19, 20, 22-25, 29-31, and 35-37 have been rejected under 35 U.S.C. § 103(a) as being obvious over Applicants' admission of the prior art. Claims 19, 20, 22-25, 29-31, and 35-37 have also been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,657,757 to Hurd et al. Claims 26-28 and 32-34 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Hurd in view of U.S. Patent No. 5,363,844 to Riederer et al. Claims 21 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicants' own admission or Hurd alone and further in view of U.S. Patent No. 4,875,485 to Matsutani. After careful consideration of these rejections, we respectfully disagree.

As recited in amended claims 19, 29, and 35, the claimed invention is directed at methods of generating multiple images of a patient using an imaging

device. The invention, in its various embodiments, includes collecting first image data corresponding to a first parameter set and then stopping the collecting of the first image data for a delay period of *an adaptable value*. After the delay period, second image data corresponding to a second parameter set is collected, as recited in amended claims 19 and 35. Alternatively, claim 29 requires sequentially indexing the imaging device to each parameter in a plurality of parameter sets, collecting further image data for each parameter set, and stopping the collecting for each further image data for respective delay period of a respective adaptable value. The first adaptable value and the respective adaptable values may be set to a predetermined value, as recited in new claim 38, or each adaptable value may be adjusted to execute one or more different delay periods, as stated in new claim 39.

We agree with the Examiner that the prior art does not disclose stopping the collection of image data for a delay period. The Examiner contends that such stopping is obvious. The Examiner, however, has not considered a delay period of *an adaptable value*, as now recited in amended claims 19, 29, and 35.

Turning now to the prior art, in particular the Hurd reference, Hurd's method merely loads a pulse sequence parameter, executes a pulse sequence, separately processes and stores the acquired data, and loops back to repeat the steps for a next pulse sequence parameter. Hurd, as well as the prior art relied upon by the Examiner, does not teach nor suggest stopping the collection of image data for a delay period with an adaptable value.

Stopping for a delay period with an adaptable value before the collection of subsequent image data offers certain advantages. For example, the delay period can be a predetermined value selected by an operator corresponding to the time it takes for a patient to exhale and inhale and again hold his or her breath for the next image data to be taken for a different orientation, such as a horizontal view versus a previous vertical view, while the patient remains at the same location. Alternatively, the delay period can be set such that image data for a different orientation can be taken immediately after the image data for the previous orientation while the patient holds a single breath and remains at the same location. If image data for the different orientations is taken quickly enough, the patient needs to hold his or her breath only once while image data for multiples views are taken.

In other implementations, the delay period with adaptable values allows Applicants' system to adjust the delay period between each view to a different value, as may be desired in a particular procedure. For example, a controller may be programmed to dynamically adjust the delay periods between taking image data for different views when the patient is moved to different locations to obtain images of different body portions. Thus, if an automatic table moving device is utilized, the controller can provide a signal to actuate the table to move the patient to various locations, while the controller also adjusts the delay period between each view to optimize the procedure. In this way, the patient can be moved rapidly to various locations to minimize the length of the procedure.

The prior art does not discuss imaging procedures with such advantages. Without these advantages, there is no suggestion of stopping the collection of image data for a delay period of an adaptable value, as now required by amended claims 19, 29, and 35. Therefore, the prior art the Examiner relies on does not render the claimed invention in amended claims 19, 29, and 35 as obvious.

Accordingly, reconsideration of the rejections under 35 U.S.C. § 103(a) and allowance of claims 19, 29, and 35 are respectfully requested.


Because neither Riederer nor Matsutani overcomes the deficiencies of the prior art discussed above and relied upon by the Examiner and because claims 21, 26-28, and 32-34 depend from amended independent claims 19, 29, or 34, the reasons for allowance of claims 19, 29, and 35 apply as well to these dependent claims.

CONCLUSION

In view of the above amendments and remarks, it is respectfully submitted that the present form of the pending claims (Claims 19 through 39) are now in condition for allowance. If the Examiner believes that personal contact would be advantageous to the disposition of this case, please contact the undersigned Attorney at the earliest convenience of the Examiner.

Respectfully submitted by,

Dated: 7-28-03


Steven L. Oberholtzer
Reg. No.: 30,670
Attorney for Applicants

BRINKS HOFER GILSON & LIONE
P.O. Box 10395
Chicago, IL 60610
(734) 302-6000

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Commissioner for Patents, P.O. Box 1451, Arlington, VA 22313-1450 on 7-28-03.

By: 